Exploring Aeronautics			
2005 Mathematics			
Content and Achievement Standards			
North Dakota Mathematics			
Grade 5			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	ND	MA.5.5.2.3	Identify the attributes of an angle and draw angles using protractors
Fundamentals of Aeronautics (145-176)	ND	MA.5.5.3.6	Make predictions and draw conclusions based on data collected from a sample group
Fundamentals of Aeronautics (145-176)	ND	MA.5.5.4.1	Estimate and measure length to the nearest eighth inch
Fundamentals of Aeronautics (145-176)	ND	MA.5.5.5.1	Analyze patterns represented by tables and graphs
Wings(177-208)	ND	MA.5.5.4.5	Select and use appropriate units when measuring length, area, and volume
Airplane Control(209-256)	ND	MA.5.5.2.3	Identify the attributes of an angle and draw angles using protractors
The Resource Center	ND	MA.5.5.1.11	Compare equivalent fractions, decimals, and percents, e.g., 75/100 =.75 = 75%
Science of Flight	ND	MA.5.5.3.6	Make predictions and draw conclusions based on data collected from a sample group
Integrating with Aeronautics	ND	MA.5.5.1.12	Represent ratios and percents as parts of a whole using models and pictures
Integrating with Aeronautics	ND	MA.5.5.5.1	Analyze patterns represented by tables and graphs
Intro to Aeronautics (109-123)	ND	MA.5.5.3.6	Make predictions and draw conclusions based on data collected from a sample group
Scientific Method(124-144)	ND	MA.5.5.3.6	Make predictions and draw conclusions based on data collected from a sample group
Exploring Aeronautics			
2005 Mathematics			
Content and Achievement Standards			
North Dakota Mathematics			
Grade 6			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	ND	MA.6.6.2.1	Identify relationships between pairs of angles; i.e., adjacent, vertical, complementary, and supplementary
Fundamentals of Aeronautics (145-176)	ND	MA.6.6.3.1	Collect and organize data, select and use an appropriate display; i.e., a frequency table, a line and bar graph
Fundamentals of Aeronautics (145-176)	ND	MA.6.6.5.1	Identify and describe patterns represented by tables, graphs, and sequences
Wings(177-208)	ND	MA.6.6.4.4	Distinguish among perimeter, area, surface area, and volume

Wings(177-208)	ND	MA.6.6.4.5	Select appropriate tools and units to determine the measurements needed for calculating perimeter, circumference, area, surface area, and volume
Wings(177-208)	ND	MA.6.6.4.6	Use formulas to determine the circumference and area of circles and the perimeter and area of triangles and parallelograms
Wings(177-208)	ND	MA.6.6.4.7	Use area formulas to determine the surface area of right prisms and square pyramids
Science of Flight	ND	MA.6.6.3.1	Collect and organize data, select and use an appropriate display; i.e., a frequency table, a line and bar graph
Science of Flight	ND	MA.6.6.3.3	Use experiments or simulations to determine probabilities
Integrating with Aeronautics	ND	MA.6.6.1.14	Estimate the results of problems involving whole numbers, fractions, and decimals
Integrating with Aeronautics	ND	MA.6.6.3.6	Make predictions based on trends identified in tables and graphs
Intro to Aeronautics (109-123)	ND	MA.6.6.3.1	Collect and organize data, select and use an appropriate display; i.e., a frequency table, a line and bar graph
Scientific Method(124-144)	ND	MA.6.6.3.1	Collect and organize data, select and use an appropriate display; i.e., a frequency table, a line and bar graph
Exploring Aeronautics			
2005 Mathematics			
Content and Achievement Standards			
North Dakota Mathematics			
Grade 7			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	ND	MA.7.7.3.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph
Fundamentals of Aeronautics (145-176)	ND	MA.7.7.3.2	Determine possible outcomes using organized lists, tree diagrams, or Venn diagrams
Science of Flight	ND	MA.7.7.2.1	Make observations about relationships between two- and three-dimensional figures; e.g., a cube is made with six squares
Science of Flight	ND	MA.7.7.3.3	Formulate hypotheses, conduct probability experiments, and draw conclusions from results
Integrating with Aeronautics	ND	MA.7.7.1.1	Use ratios and proportions to represent relationships
Integrating with Aeronautics	ND	MA.7.7.3.6	Describe how scale can make graphs, tables, and charts appear misleading
Integrating with Aeronautics	ND	MA.7.7.4.1	Estimate a measurement to the degree of precision that the tool provides
Integrating with Aeronautics	ND	MA.7.7.4.4	Select and use appropriate tools and units to determine the measurements needed for calculating perimeter, circumference, area, surface area, and volume

Integrating with Aeronautics	ND	MA.7.7.4.5	Solve problems involving scale factors, using ratio and proportion
Intro to Aeronautics (109-123)	ND	MA.7.7.3.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph
Scientific Method(124-144)	ND	MA.7.7.3.1	Formulate a question; collect, organize, and display data using a bar, line, and circle graph
Scientific Method(124-144)	ND	MA.7.7.3.3	Formulate hypotheses, conduct probability experiments, and draw conclusions from results
Exploring Aeronautics			
2005 Mathematics			
Content and Achievement Standards			
North Dakota Mathematics			
Grade 8			
Activity/Lesson	**State**	**Standards**	
Fundamentals of Aeronautics (145-176)	ND	MA.8.8.3.2	Collect, organize, and display data using scatter and stem-and-leaf plot
Fundamentals of Aeronautics (145-176)	ND	MA.8.8.3.7	Make inferences based on analysis of data and interpretation of graphs
Wings(177-208)	ND	MA.8.8.2.8	Use two-dimensional representations of three-dimensional objects to visualize and solve problems; e.g., those involving surface area and volume
Science of Flight	ND	MA.8.8.3.1	Formulate a question and select a random or representative sample
Integrating with Aeronautics	ND	MA.8.8.2.4	Apply the Pythagorean Theorem to problems involving right triangles
Integrating with Aeronautics	ND	MA.8.8.3.7	Make inferences based on analysis of data and interpretation of graphs
Integrating with Aeronautics	ND	MA.8.8.5.2	Use variables, expressions and equations to represent problem situations
Scientific Method(124-144)	ND	MA.8.8.3.1	Formulate a question and select a random or representative sample